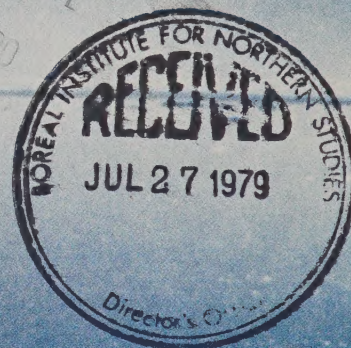


SCIENCE ADVISORY BOARD OF THE NORTHWEST TERRITORIES

FURTHER EDUCATION IN THE NORTH

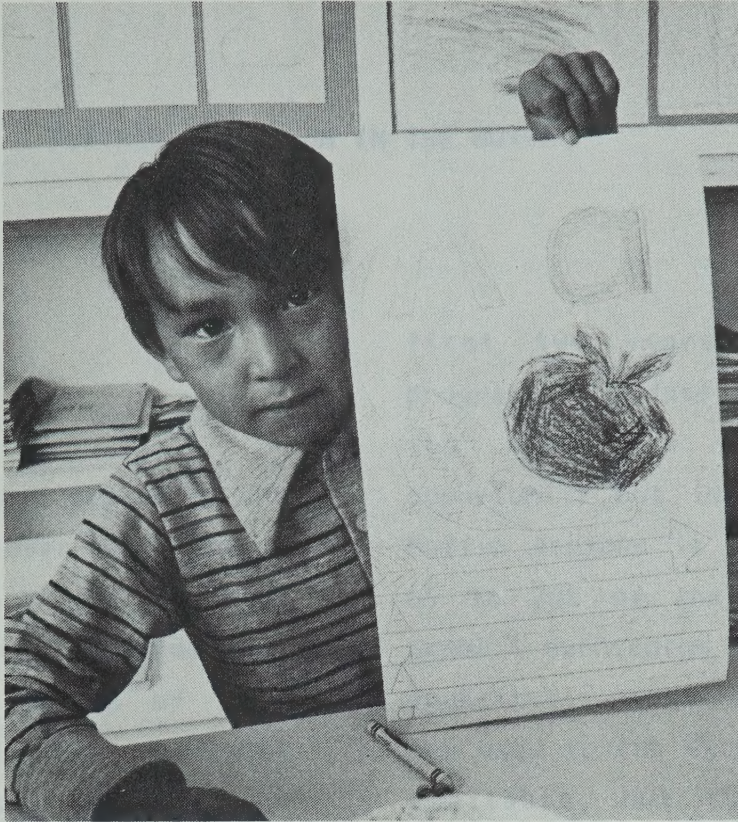
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**FURTHER
EDUCATION**
IN THE NORTH

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FURTHER EDUCATION IN THE NORTH

The Present

The present educational system in the N.W.T. has evolved over many years. A full understanding of the rationale for the present system requires some knowledge of the course of this evolution and of the cultural background of the main ethnic groups involved, Inuit, Dene, Metis and Euro-Canadians. Since most readers of this paper will possess this knowledge it is not repeated here except where details are part of the immediate discussion.

The present policy in the N.W.T. is to give education from kindergarten to Grade 10 in all except the very smallest communities. The children are not separated from their families the way they were in the days of residential schools. The Education Ordinance passed in January 1977 permits a local education authority to prescribe the language of instruction for kindergarten and the

first two years of the school program. To date no communities in the west are exercising this opportunity but in the Keewatin and Baffin Regions it is estimated that 65 to 70% of the kindergarten and Grade 1 curriculum is being taught in Inuktitut. Qualified native teachers are used to the extent that they are available, but their numbers are still limited. Native classroom assistants are widely used in conjunction with teachers recruited in the south; there are currently 127 classroom assistant positions.

Secondary education to the senior matriculation level (Grade 12) is given in the larger centres -- Yellowknife, Hay River, Pine Point, Fort Smith, Inuvik, and Frobisher Bay. Most of the high schools have adjoining hostels that provide accommodation for students from the smaller communities. These schools provide both vocational training and academic courses leading to university entrance. Native students

enter high school only in limited numbers, tend to be concentrated in the vocational programs, and have a high drop-out rate.

Every qualified student who meets residency requirements in the N.W.T. can get four years of further education at any recognized institution in Canada with essentially all expenses paid. At latest count 259 students were taking advantage of this opportunity, 177 in universities and 82 in other institutions, but few of these were native. The Government of the N.W.T. provides counselling for these students but even with this help quite a few give up before they complete their programs.

The Adult Vocational Training Center at Fort Smith is a unique institution that has evolved to meet the perceived educational needs of the young adults, especially those with incomplete earlier academic training. It offers a wide range of academic, vocational and sub-professional courses. The subjects taught have been selected to meet the special needs of the Territories. The courses are very flexible and can

readily be changed to meet new requirements. In many cases the course for each student is designed to fit his or her educational background and to meet an immediate need for some further vocational or academic education to fit a specific job prospect. The course begins when the student arrives and ends when he or she leaves. Diplomas are given even for incomplete courses and record only actual achievements.

There are courses at Fort Smith for teacher training, nursing assistants, dental technicians, electronics, meteorology, and a wide range of trade apprenticeships which reach a level of full certification in many trades. All of the courses that are readily portable are also given locally in communities throughout the N.W.T. where the demand is large enough.

Fort Smith is not swamped with students. The problem is rather to attract students who wish an education that prepares them for community leadership or other wage employment.

There is clearly no unfilled demand

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for a degree-granting institution at the undergraduate level in the N.W.T. Anyone who has the needed academic qualifications, can make the required social adjustment, and wants a degree has ready access to a good university. Since learning the ways of the outside world is an important part of the university experience, it is doubtful whether more than a handful of those now going to university in southern Canada would if given the chance attend a university in the north.

The Future

While the Science Advisory Board is obviously concerned with education in general it clearly has a special interest in education for science. From this special point of view the problem of further education in the north breaks down into two stages; the first is to get a higher percentage of the young people especially Inuit and Dene and Metis to continue their education, first through high school and then later beyond high school; and the second is how to attract a reasonable

percentage of the best of these students into careers in science, engineering and technology in the Territories. Only a few will go on to university degrees but it is hoped that many more will qualify for the technical trades through which science is applied to everyday life.

The Board sees at least three proposals on which action can be accelerated now with comparatively little expenditure in order to move toward a solution of both of these problems.

The first proposal is to take advantage of the advent of Anik B to greatly increase the educational content of T.V. programs in the Territories. A few inquiries that the Board has made in relation to T.V. and radio programming suggests that there would be a ready audience for programs about science that were both educational and entertaining. These programs would serve a double purpose of interesting the older people in science and of encouraging the school age group to go on to high school to explore further the challenge of science. At the present stage in the evolution of the

struggle for cultural identity, it is important to make clear that education and science will help an individual to participate effectively in either the traditional lifestyle or to join in the quite different life that surrounds the new economic activities in the North.

A good example of the sort of knowledge that might be disseminated in such a program is the need for and methods of doing research on wildlife, and how this research can lead ultimately to much better management of the resource both for environmental protection and especially for local consumption or economic exploitation. This could strengthen the wildlife management program and greatly assist efforts to have it staffed mainly by northerners.

The second proposal is the establishment of a junior college in the Territories. This college would probably be located in Yellowknife. It should offer a variety of courses oriented toward the needs of the territorial population. It would be more academically oriented than Fort Smith and many of its courses would

be designed to be acceptable for credit at one or more of the Western Universities. In fact it might be well to consider having the junior college planned in conjunction with and originally staffed by either one of the Western Universities or a consortium of several. The advantage of having the junior college in the Territories would be that it would become widely known to potential students and they would recognize that the social and cultural adjustment required to attend the college would be much less than that of going "outside" to a southern university. The SAB has been repeatedly told that apprehension about the problems of adjusting to the unfamiliar lifestyle of southern cities is an important factor in discouraging not only the Inuit and Dene but also other northern students from taking advantage of the existing opportunities for a university education in the south.

The third proposal involves the northern resource centre already being planned for Yellowknife.

Early in its discussions the Board identified the creation of an

indigenous scientific community in the N.W.T. as one of its most important long-range goals. Science will never be fully used in the service of the residents of the Territories until there is a full range of competent scientists and engineers who live permanently in the North and make their careers there. At present almost all the work done by scientists and engineers in the N.W.T. is done by southerners who come north only as the job requires and in summer if possible. The outstanding exceptions are those who work in mining, oil exploration, transportation, communications, construction, etc. either for private enterprise or for the Government. Their number is small but their importance great. However, very few of these are available for research or other innovative work, since nearly all are involved in management or technical operating positions.

The Board sees two stages in the transformation of the existing migrant scientific community into one that is stable and resident. The first is to provide a Northern base for many of the scientists and engineers who now work in the North

from a southern base. These are predominantly Federal Government employees from many Departments including Indian and Northern Affairs, Energy Mines and Resources, Fisheries, Environment, Public Works, Transport, NRC, CMHC, etc. The Board sees the growth of the Northern Scientific Resource Centers Program and especially the planning of a center for Yellowknife as a great opportunity to begin this process.

The Northern Scientific Resource Centers Program is fully described in a paper by the DIAND in September 1976. The program began in 1960 when the Advisory Committee on Northern Development agreed that there was a need for a number of general purpose research stations in the North. As a result the Inuvik Laboratory was opened in December 1963 with the Northern Coordination and Research Center responsible for coordinating the research program on behalf of the Scientific Research Sub-Committee of ACND. In October 1971, the Sub-Committee on Science and Technology (same committee-new name) recommended the establishment of a general purpose research facility at Igloolik to serve the Eastern Arctic.

Construction commenced in 1973 and the laboratory opened in 1975. Earlier this year (1978) a small laboratory was opened in Frobisher Bay, primarily to serve the needs of the Eastern Arctic Marine Environmental Study (EAMES). The Frobisher laboratory has been fully utilized this summer but is likely to have space available in about two years when the EAMES program ends or at least slows down.

In 1974, a Working Group of the Sub-Committee on Science and Technology proposed further laboratories at Whitehorse, Yellowknife and Resolute Bay. These laboratories "will not only contain the type of scientific support services provided at Inuvik and Igloolik, but will also contain dedicated areas for permanent users. DIAND, in accordance with its responsibilities for fostering northern research, will bear the cost of constructing, operating and maintaining such facilities, with other agencies paying rental fees for accommodation dedicated to their use exclusively."

The Board sees this plan for the

construction of the Yellowknife Center as a unique opportunity to stimulate the growth of an indigenous scientific community in the North and also to provide the nucleus around which provision for further education in science can be built.

For the past year the Chairman, the Executive Secretary of the SAB and the Territorial Government's Science Advisor have been encouraging suitable agencies in the Federal Government to plan for the inclusion of staff in the Yellowknife Center. This is discussed in more detail in another paper. What concerns this discussion is whether the Center can become a credible nucleus for the growth of advanced education in Science and Engineering in the North.

Everyone who participates in the Center must do everything possible to ensure that Northerners, both native and others, are employed wherever possible. This will often involve special training courses and having jobs done less than perfectly but it must be a top priority. The Government has much to learn from private industry in this field. Over the years this policy will gradually

interest more and more local people in careers in science and technology and ultimately result in the education of fully qualified professionals from the North. In the meantime, the educational role of the center could be strengthened in other ways.

A strong interaction should be developed between scientists at the Center and students at the two local high schools and the junior college when it is formed. Sir John Franklin School includes students from the Arctic Coast and the Keewatin as well as from Yellowknife. If northern young people were able to develop an understanding of scientific work early enough in their lives it is to be expected that some of them would opt for careers as professional scientists.

Plans for the Center should include space for university research teams. Many of these will be doing seasonal work but some priority should be given to those who plan to stay for the whole year. The Association of Canadian Universities for Northern Studies might undertake to seek out suitable people and projects. In

some cases senior University staff might also spend a sabbatical year or longer working as a Federal employee on one of the Government programs.

These university research teams and several of the Federal government teams would include people who are fully qualified to supervise research programs for both masters and doctorates. Universities would approve such an arrangement and grant the degrees as long as they remained in complete control of the approval of supervisors and the examination of candidates. Students who did their thesis work at the Center would certainly know more about the North and hence about their subject than if they had done similar work from a southern base. In addition a sprinkling of energetic students would greatly enliven the intellectual and social atmosphere of the Center and some would remain in the North.

The Center would have a very lively intellectual life once it had accumulated a substantial core of Government staff - both Federal and Territorial - carrying on continuing research programs, as well as some

researchers from private industry, consultants in various professions, and the University group outlined above. There would inevitably be seminars and visiting lecturers. It would be easy and natural to begin a program of local lectures at both the professional and the popular level. These could be used as the base on which to build the adult education program mentioned earlier.

All of these plans would require ready access to a good local library and through it to the many computer data bases that could usefully be consulted. The Territorial Government already has the nucleus of such a library and it should be used as the foundation on which to build. The various elements in the Center must be discouraged from attempting to create independent libraries.

The Board's proposals for the evolution of continuing education in the North do not include the foundation of a University at the present time. The University of the North established now would have few, if any, northern students and would be seen as just another southern intrusion using money for which

northerners think they see better uses. However, the proposals would all help to foster an intellectual environment in which a university would naturally be founded when the time is ripe.

The junior college would undoubtedly evolve toward an undergraduate university program and the educational activities in the Resource Center would provide the nucleus for graduate work; the two might well come together in the future as the University of the North. In the meantime, the integration of these three proposals would provide the basis for a healthy evolution of education in science and technology in the Territories.

Dr. O.M. Solandt
Chairman
Science Advisory Board
of the Northwest Territories

April, 1979

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SOLANDT, O.M.
AUTHOR

Further education in the north.

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